REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1, 6, 7, 14, and 19 are currently being amended.

Claims 23-31 are being added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Support for new claim 23 is provided in the specification, for example, by original claim 17.

After amending the claims as set forth above, claims 1-16 and 19-31 are now pending in this application.

Rejections under 35 U.S.C. § 112second paragraph

The Examiner rejected claims 21 and 22 as allegedly being indefinite due to the reference to a molecule being a compound of Formula II. Applicant respectfully traverses this rejection.

Claims 5 and 6, from which claims 21 and 22 respectively depend, specify a molecule that includes a moiety of formula II. Such a molecule may be a single nucleotide of formula II, or a oligomer or polymer chain that includes such a moiety. Claims 21 and 22 then specify that the molecule is the nucleotide, not incorporated in a chain. Therefore, claims 21 and 22 properly limit the term "molecule" in claims 5 and 6, and are not indefinite.

Applicant respectfully requests that the Examiner reconsider and withdraw this rejection.

Rejections under 35 U.S.C. § 102

The Examine rejected claims 1-2, 4, 7, 9, and 20 as allegedly being anticipated by Okada et al., 1978, *Nucl Acids Res* 5:2289-2296 by the description of 7-aminomethyl-7-deazaguanosine isolated from RNA. Applicant respectfully traverses this rejection as it may be considered in connection with the present claims.

The Examiner noted that the referenced compound was isolated from RNA. As such it would be a 2'-OH compound. The present independent claims 1 and 7 specify that the group R_2 is hydrogen. Thus, Applicant respectfully submits that Okada et al does not anticipate the present claims.

The Examiner rejected claim 16 as allegedly being anticipated by Nishimura et al., US 4,435,569, asserting that Nishimura teaches a substituted deazaguanosine in which a group corresponding to R1 may be aminomethyl. The Examiner points particularly to the compounds described in col. 2. Applicant respectfully traverses this rejection.

Applicant respectfully requests that the Examiner note that Nishimura describes certain 7-deazapurine derivatives (see Abstract) that have antitumor activity. Nishimura does not describe nucleosides or nucleotides, and in particular does not describe substituted deazaguanosines. In contrast, claim 16 specifies a nucleotide sequence that includes a 7-deazaguanosine base as specified. Claim 16 thus indicates that the specified base is part of a nucleotide that is incorporated in the nucleotide sequence. As a result, Nishimura cannot anticipate claim 16.

The Examiner rejected claims 10-11, 13, 15, and 20 as allegedly being anticipated by Gilead Sciences, Inc. (PCT Publ. WO 93/09127). The Examiner asserted that WO 93/09127 discloses a chemical analog of the same structure as the molecule of formula II or formula III as

disclosed in the present invention. Applicant respectfully traverses these rejections as they may be considered in connection with the present claims.

Gilead Sciences, WO 93/09127 describes certain compounds that include 7-deazaguanine derivatives and their use in oligonucleotides for triple helix formation. However, those compounds do not include compounds that have a substituted alkyl moiety at the present R1 position or other group as specified in present claim 20, and therefore claim 20 is not anticipated by the cited reference.

In addition, this reference does not specifically describe the 7-ethyl, or 7-propyl derivatives specified in current claims 10 and 11, nor does it provide any suggestion to select those compounds from among the compounds included within the genus of Gilead Sciences formula II. The Examiner asserted that only a small number of compounds was involved, because the reference specified C1-C4 alkyl. However, C1-C4 alkyl is only one of 9 possible selections specified at the 7-position, and an additional 8 possible selections specified for R4. Thus, there is a substantial number of compounds included within the Gilead Sciences formula II, with no suggestion that the specific compounds identified in present claims 10 and 11 should be selected. In contrast, as described in the present specification, the compounds of claims 10 and 11 were found to be advantageous in the present uses. As a result, present claims 10 and 11 are not anticipated by the Gilead Sciences reference.

The Examiner also rejected claim 19 as allegedly being anticipated by Ramsaeva et al., 1997, *Helv. Chim. Acta* 1809-1822, and by Seela, US 5,844,106. Applicant respectfully traverses this rejection as it may be considered in connection with present claim 19.

With respect to Ramsaeva et al., present claim 19 does not include compounds that have groups at R_3 of the type described in Ramsaeva. Thus, this reference does not anticipate claim 19.

Considering Seela, Applicant submits that the reference does not describe compounds that are 7-deazaguanosine derivatives. Instead, the compounds described in Seela contain aromatic six-membered rings as in adenine, instead of a ring with two double bonds as in guanine. The structure cited by the Examiner at col. 17 also has the aromatic six-membered ring, but the ring appears to be drawn incorrectly, with two of the double bonds adjacent to each other.

Because Seela does not describe 7-deazaguanosine derivatives, the reference cannot anticipate claim 19.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-11, 13-16, and 19-22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Seela, US 5,844,106, in view of Okada, 1978, *Nucl Acids Res* 5:2289-2296. Applicant respectfully traverses these rejections.

As indicated above in connection with the rejections under 35 U.S.C. 102, Seela does not describe 7-deazaguanosine derivatives or suggest preparation of such derivatives, and therefore also does not describe or suggest any use for 7-deazaguanosine derivatives or the incorporation of such derivatives in nucleic acids.

As a result, there is no suggestion or motivation to combine the references in any way. Consequently, the present invention is not obvious over the cited references.

In view of the lack of suggestion to provide the present claimed invention as indicated in the discussion above, Applicant respectfully requests that the Examiner reconsider and withdraw the present rejections.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Atty. Dkt. No. 026063-1901

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-0872.

Respectfully submitted,

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By _____

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